



DEPARTMENT OF PERMITTING, ENVIRONMENT, AND REGULATORY
AFFAIRS (PERA)

BOARD AND CODE ADMINISTRATION DIVISION

NOTICE OF ACCEPTANCE (NOA)

MIAMI-DADE COUNTY, FLORIDA
PRODUCT CONTROL SECTION

11805 SW 26 Street, Room 208

Miami, Florida 33175-2474

T (786) 315-2590 F (786) 315-2599

www.miamidade.gov/pera/

ES Windows, LLC

10653 N.E. Quaybridge Ct.

Miami, FL 33138

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County PERA-Product Control Section to be used in Miami-Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami-Dade County) and/or the AHJ (in areas other than Miami-Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. PERA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code, including the High Velocity Hurricane Zone.

DESCRIPTION: Series "S-5000" Outswing Aluminum Casement Window – L. M. I.

APPROVAL DOCUMENT: Drawing No. **W08-08**, titled series "S-5000 Alum. Outswing Casement Wdw. (L.M.I.)", sheets 1 through 10 of 10, dated 01/23/08 with revision "C" dated 02/20/12, signed and sealed by Javad Ahmad, P. E., bearing the Miami-Dade County Product Control Revision stamp with the Notice of Acceptance number and Expiration date by the Miami-Dade County Product Control Section.

MISSILE IMPACT RATING: Large and Small Missile Impact Resistant.

LIMITATIONS: Glass lites wider than 36" shall have two setting blocks per FBC requirements.

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, **Barranquilla, Colombia**, model/ series and following statement: "Miami-Dade County Product Control Approved" unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA revises NOA No. 11-0419.01 and consists of this page 1, evidence pages E-1 and E-2, as well as approval document mentioned above.

The submitted documentation was reviewed by **Jaime D. Gascon, P. E.**



J. Gascon
5/23/12

NOA No. 12-0223.44

Expiration Date: April 03, 2013

Approval Date: May 24, 2012

Page 1

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS

1. Manufacturer's die drawings and sections.
(Submitted under previous NOA No. 11-0419.01 and 08-0204.05)
2. Drawing No. **W08-08**, titled series "S-5000 Alum. Outswing Casement Wdw. (L.M.I.)", sheets 1 through 10 of 10, dated 01/23/08 with revision "C" dated 02/20/12, signed and sealed by Javad Ahmad, P. E.

B. TESTS

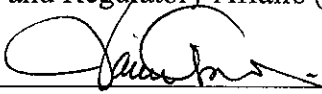
1. Test reports on: 1) Air Infiltration Test, per FBC, TAS 202-94
2) Uniform Static Air Pressure Test, Loading per FBC TAS 202-94
3) Water Resistance Test, per FBC, TAS 202-94
4) Large Missile Impact Test per FBC, TAS 201-94
5) Cyclic Wind Pressure Loading per FBC, TAS 203-94
6) Forced Entry Test, Type "B" Window, Grade 10,
per FBC 2411 3.2.1, TAS 202-94 and per ASTM F 588-07
along with marked-up drawings and installation diagram of series S-5000 outswing aluminum casement window, prepared by Fenestration Testing Laboratory, Inc., Test Reports No.'s **FTL-6294** and **FTL-6295**, dated 02/25/11 and 03/16/11, both signed and sealed by Marlin D. Brinson, P. E.
(Submitted under previous NOA No. 11-0419.01)
2. Test reports on: 1) Air Infiltration Test, per FBC, TAS 202-94
2) Uniform Static Air Pressure Test, Loading per FBC TAS 202-94
3) Water Resistance Test, per FBC, TAS 202-94
4) Large Missile Impact Test per FBC, TAS 201-94
5) Cyclic Wind Pressure Loading per FBC, TAS 203-94
6) Forced Entry Test, Type "B" Window, Grade 10, per FBC 2411 3.2.1,
TAS 202-94 and per ASTM F 588-04
along with marked-up drawings and installation diagram of series S-5000 outswing aluminum casement window, prepared by Fenestration Testing Laboratory, Inc., Test Report No. **FTL-5336**, dated 11/16/07, signed and sealed by Carlos S. Rionda, P. E.
(Submitted under previous NOA No. 08-0204.05)

C. CALCULATIONS

1. Anchor verification calculations and structural analysis, complying with FBC, prepared by Al-Farooq Corporation, dated 04/06/11, signed and sealed by Javad Ahmad, P. E.
(Submitted under previous NOA No. 11-0419.01)
2. Glazing complies with ASTM E1300-04

D. QUALITY ASSURANCE

1. Miami-Dade Department of Permitting, Environment, and Regulatory Affairs (PERA).


Jaime D. Gascon, P. E.
Product Control Section Supervisor
NOA No. 12-0223.44
Expiration Date: April 03, 2013
Approval Date: May 24, 2012

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

E. MATERIAL CERTIFICATIONS

1. Notice of Acceptance No. **11-0624.02** issued to E.I. DuPont DeNemours & Co., Inc. for their "**DuPont Sentry Glass® Interlayer**" dated 05/26/2010, expiring on 01/14/17.
2. Notice of Acceptance No. **11-0624.01** issued to E.I. DuPont DeNemours & Co., Inc. for their "**DuPont Butacite® PVB Interlayer**" dated 09/08/2011, expiring on 12/11/2016.

F. STATEMENTS

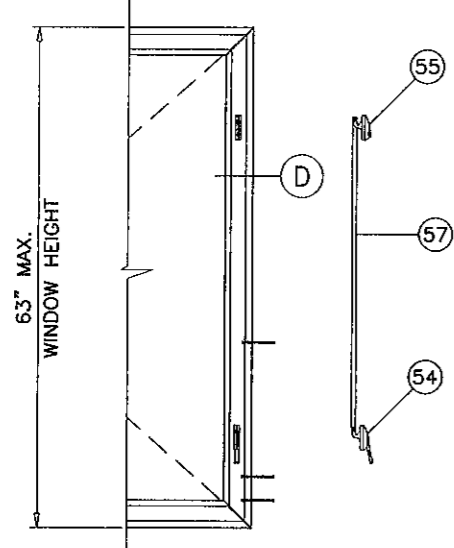
1. Statement letter of no financial interest, conformance and compliance with the **FBC-2010**, dated 02/21/12, signed and sealed by Javad Ahmad, P. E.
2. Distributor Agreement between, E.S. Windows – Energia Solar S.A., Barranquilla, Colombia and E.S. Windows, LLC, Miami, Florida, U.S.A., dated 10/20/10, signed by Carla Garcia Torrente and by Andres Chamorro, respectively.
(Submitted under previous NOA No. 11-0419.01)
3. Laboratory compliance letters for Test Reports No.'s **FTL-6294** and **FTL-6295**, issued by Fenestration Testing Laboratory, Inc., dated 02/25/11 and 03/16/11, both signed and sealed by Marlin D. Brinson, P. E.
(Submitted under previous NOA No. 11-0419.01)
4. Proposal No. **10-0505** issued by Product Control, dated 06/29/10, signed by Manuel Perez, P. E.
(Submitted under previous NOA No. 11-0419.01)
5. Laboratory compliance letter for Test Report No. **FTL-5336**, issued by Fenestration Testing Laboratory, Inc., dated 11/16/2007, signed and sealed by Carlos S. Rionda, P. E.
(Submitted under previous NOA No. 08-0204.05)

G. OTHERS

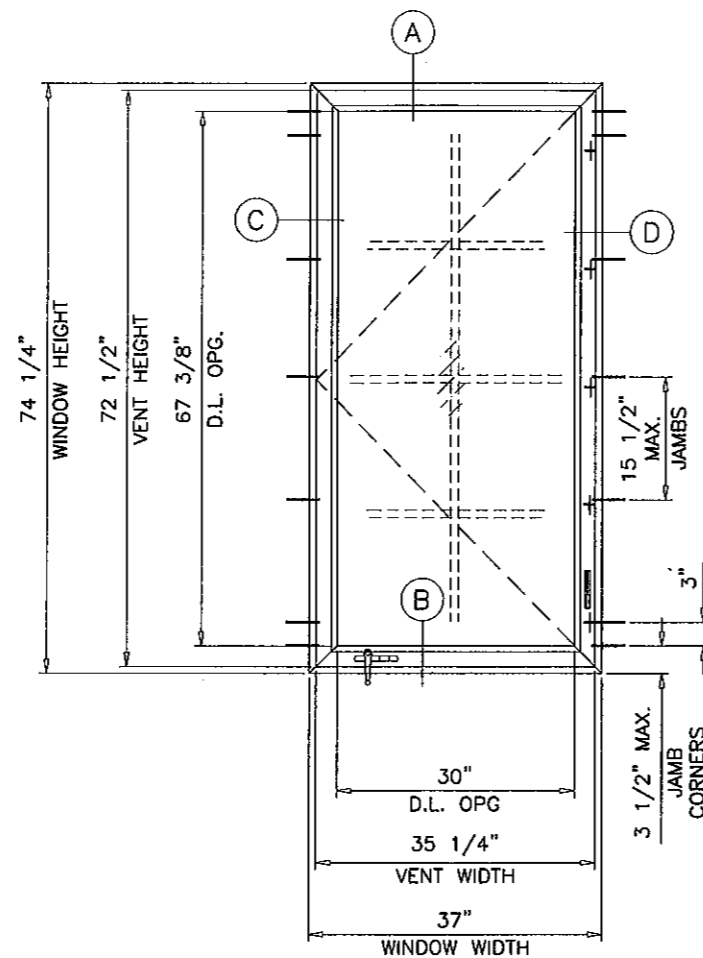
1. Notice of Acceptance No. **11-0419.01**, issued to ES Windows, LLC, for their Series "**ES-5000 Outswing Aluminum Casement Window – L.M.I.**", approved on 06/30/11 and expiring on 04/03/13.



Jaime D. Gascon, P. E.
Product Control Section Supervisor
NOA No. 12-0223.44
Expiration Date: April 03, 2013
Approval Date: May 24, 2012



CAM LOCKS
(2) LOCKING POINTS
ALL SIZES

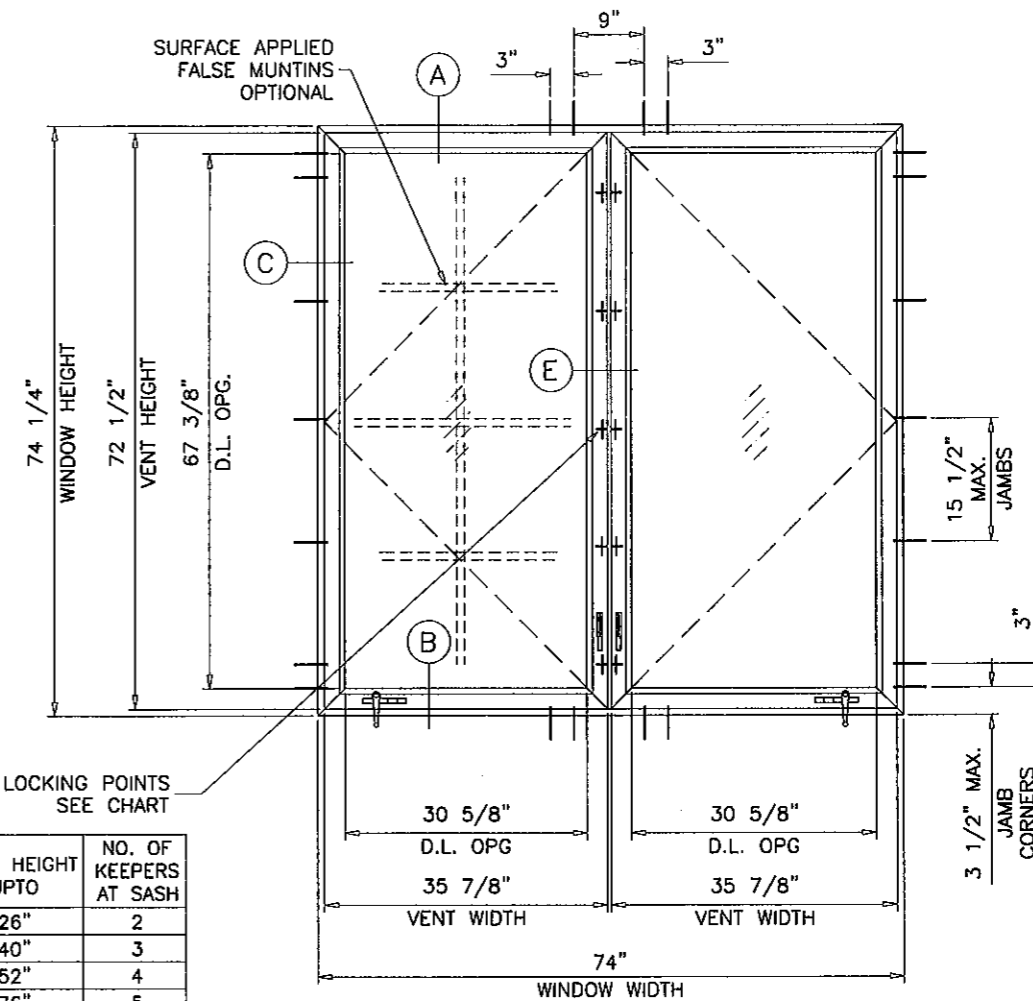


SINGLE (X)

MULTI POINT LOCK

WDW. HEIGHT UPTO	NO. OF KEEPERS AT SASH
26"	2
40"	3
52"	4
76"	5

LOCKING POINTS
SEE CHART



DOUBLE (XX)

TYPICAL ELEVATIONS

SERIES 5000

ALUMINUM OUTSWING CASEMENT WINDOW

DESIGN LOAD RATINGS FOR THESE WINDOWS TO BE AS PER CHARTS SHOWN ON SHEET 2.

APPROVAL APPLIES TO SINGLE OR DOUBLE WINDOWS OR SIDE BY SIDE COMBINATIONS OF CASMT/CASMT OR CASEMENT WITH SERIES 5100 FIXED WINDOWS USING MULLIONS IN BETWEEN. LOWER DESIGN PRESSURE FROM CASEMENT WINDOW, FIXED WINDOW OR MULLION CHART WILL APPLY TO ENTIRE SYSTEM.

THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE INCLUDING HIGH VELOCITY HURRICANE ZONE (HVHZ).

WOOD BUCKS BY OTHERS, MUST BE ANCHORED PROPERLY TO TRANSFER LOADS TO THE STRUCTURE.

ANCHORS SHALL BE AS LISTED, SPACED AS SHOWN ON DETAILS, ANCHORS EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO.

ANCHORING OR LOADING CONDITIONS NOT SHOWN IN THESE DETAILS ARE NOT PART OF THIS APPROVAL.

A LOAD DURATION INCREASE IS USED IN DESIGN OF ANCHORS INTO WOOD ONLY.

MATERIALS INCLUDING BUT NOT LIMITED TO STEEL/METAL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF THE FLORIDA BLDG. CODE SECTION 2003.8.4.

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 12-0223.44
Expiration Date 04/03/2013
By *[Signature]*
Miami Dade Product Control

THESE WINDOWS ARE RATED FOR LARGE & SMALL MISSILE IMPACT.
SHUTTERS ARE NOT REQUIRED.

Engr: JAVAD AHMAD
CIVIL
FLA. PE # 70592
C.A.N. 3538

[Signature]

MAR 09 2012

a f c

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
1235 S.W. 87 AVE
MIAMI, FLORIDA 33174
TEL. (305) 264-8100 FAX. (305) 262-6978
COMP-ANL\W08-08ESW

S-5000 ALUM OUTSWING CASEMENT WDW. (L.M.I.)
E.S. WINDOWS, LLC
5220 N.W. 72 AVE. BAY #4
MIAMI, FL. 33166
TEL. (305) 624-7775 FAX. (305) 624-7777

no.	date	by	description
A	02.18.09		UPDATED FOR 2007 FBC
B	05.20.11		GENERAL REVISION
C	02.20.12		UPDATED TO 2010 FBC

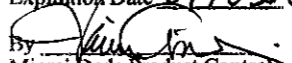
date: 01-23-08
scale: 1/2"=1'-0"
dr. by: HAMID
chk. by:

drawing no.
W08-08


sheet 1 of 10

DESIGN LOAD CAPACITY - PSF FOR (X) SIZES									
WINDOW DIMS.		WITH CAM LOCKS		WINDOWS WITH MULTI POINT LOCK					
		GLASS TYPES A, B, C, D, E, F		GLASS TYPE 'A'		GLASS TYPES 'B'		GLASS TYPES 'C', 'D', 'E', 'F'	
		EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)
19-1/8"	26"	85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
26-1/2"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
37"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
42"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
19-1/8"	38-3/8"	85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
26-1/2"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
37"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
42"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
19-1/8"	50-5/8"	85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
26-1/2"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
37"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
42"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
19-1/8"	63"	85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
26-1/2"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
37"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
42"		-	-	-	-	-	-	90.0	90.0
19-1/8"	74-1/4"	-	-	-	-	-	-	90.0	90.0
26-1/2"		-	-	-	-	-	-	90.0	90.0
37"		-	-	-	-	-	-	90.0	90.0
42"		-	-	-	-	-	-	90.0	90.0
19-1/8"	76"	-	-	-	-	-	-	90.0	90.0
26-1/2"		-	-	-	-	-	-	90.0	90.0
36"		-	-	-	-	-	-	85.4	85.4
42"		-	-	-	-	-	-	85.4	85.4
24"	48"	85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
28"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
32"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
36"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
40"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
42"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
24"	54"	85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
28"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
32"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
36"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
40"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
42"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
24"	60"	85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
28"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
32"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
36"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
40"		-	-	-	-	-	-	90.0	90.0
42"		-	-	-	-	-	-	90.0	90.0
24"	66"	85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
28"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
32"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
40"		-	-	-	-	-	-	90.0	90.0
24"	72"	-	-	-	-	-	-	90.0	90.0
28"		-	-	-	-	-	-	90.0	90.0
32"		-	-	-	-	-	-	90.0	90.0
36"		-	-	-	-	-	-	90.0	90.0
24"	76"	-	-	-	-	-	-	90.0	90.0
28"		-	-	-	-	-	-	90.0	90.0
32"		-	-	-	-	-	-	90.0	90.0
36"		-	-	-	-	-	-	85.4	85.4


DESIGN LOAD CAPACITY - PSF FOR (XX) SIZES									
WINDOW DIMS.		WITH CAM LOCKS		WINDOWS WITH MULTI POINT LOCK					
		GLASS TYPES A, B, C, D, E, F		GLASS TYPE 'A'		GLASS TYPES 'B'		GLASS TYPES 'C', 'D', 'E', 'F'	
		EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)
37"	26"	85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
53-1/8"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
74"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
84"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
37"	38-3/8"	85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
53-1/8"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
74"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
84"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
37"	50-5/8"	85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
53-1/8"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
74"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
84"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
37"	63"	85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
53-1/8"		78.9	78.9	78.9	78.9	78.9	78.9	78.9	78.9
74"		67.7	67.7	67.7	67.7	67.7	67.7	67.7	67.7
84"		-	-	-	-	-	-	60.8	60.8
37"	74-1/4"	-	-	-	-	-	-	63.9	63.9
53-1/8"		-	-	-	-	-	-	47.2	47.2
74"		-	-	-	-	-	-	40.1	40.1
84"		-	-	-	-	-	-	35.6	35.6
37"	76"	-	-	-	-	-	-	59.5	59.5
53-1/8"		-	-	-	-	-	-	43.9	43.9
74"		-	-	-	-	-	-	37.2	37.2
84"		-	-	-	-	-	-	-	-
48"	48"	85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
56"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
64"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
72"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
80"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
84"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
48"	54"	85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
56"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
64"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
72"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
80"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
84"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
48"	60"	85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
56"		85.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0
64"		79.3	79.3	79.3	79.3	79.3	79.3	79.3	79.3
72"		72.8	72.8	72.8	72.8	72.8	72.8	72.8	72.8
80"		-	-	-	-	-	-	68.0	68.0
84"		-	-	-	-	-	-	66.2	66.2
48"	66"	74.4	74.4	74.4	74.4	74.4	74.4	74.4	74.4
56"		65.1	65.1	65.1	65.1	65.1	65.1	65.1	65.1
64"		58.3	58.3	58.3	58.3	58.3	58.3	58.3	58.3
72"		-	-	-	-	-	-	53.2	53.2
80"		-	-	-	-	-	-	49.4	49.4
84"		-	-	-	-	-	-	-	-
48"	72"	-	-	-	-	-	-	56.8	56.8
56"		-	-	-	-	-	-	49.5	49.5
64"		-	-	-	-	-	-	44.2	44.2
72"		-	-	-	-	-	-	40.2	40.2
80"		-	-	-	-	-	-	-	-
84"		-	-	-	-	-	-	-	-
48"	76"	-	-	-	-	-	-	48.1	48.1
56"		-	-	-	-	-	-	41.8	41.8
64"		-	-	-	-	-	-	37.2	37.2
72"		-	-	-	-	-	-	33.8	33.8
80"		-	-	-	-	-	-	-	-
84"		-	-	-	-	-	-	-	-

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 12-0223.44
Expiration Date 04/03/2013
By: 
Miami Dade Product Control

NOTE:
GLASS CAPACITIES ON THIS SHEET ARE
BASED ON ASTM E1300-04 (3 SEC. GUSTS)
AND FLORIDA BUILDING COMMISSION
DECLARATORY STATEMENT DCA05-DEC-219

Engr: JAVAD AHMAD
CIVIL
FLA. PE # 70592
C.A.N. 3538


MAR 09 2012



AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
1235 S.W. 87 AVE
MIAMI, FLORIDA 33174
TEL. (305) 264-8100 FAX. (305) 262-6978
COMP-ANL\W08-08ESW

S-5000 ALUM OUTSWING CASEMENT WDW. (L.M.I.)

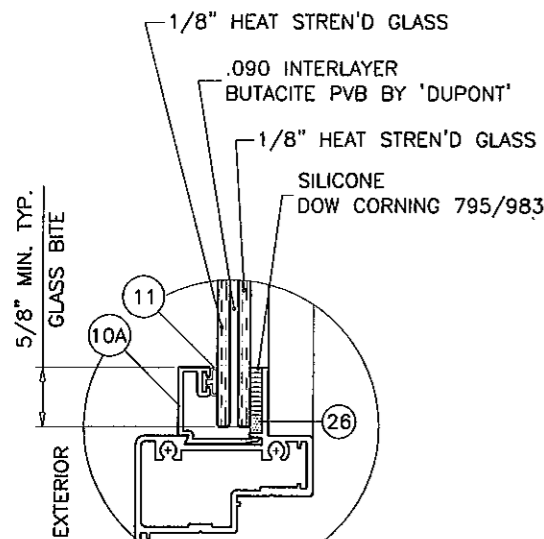
E.S. WINDOWS, LLC
5220 N.W. 72 AVE. BAY #4
MIAMI, FL. 33166
TEL. (305) 624-7775 FAX. (305) 624-7777

revisions:

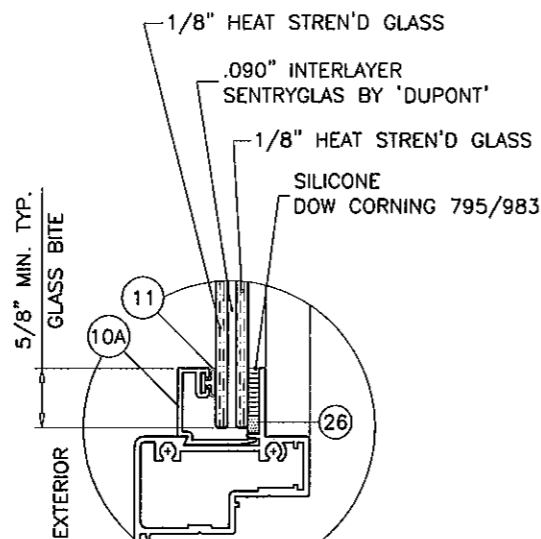
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C	02.20.12		NO CHANGE THIS SHEET

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chk: by:

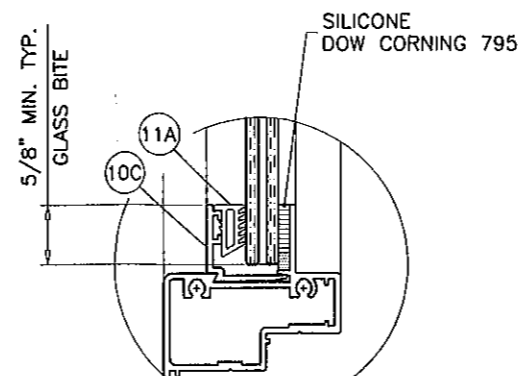
drawing no.
W08-08
sheet 2 of 10



GLASS TYPE 'A'

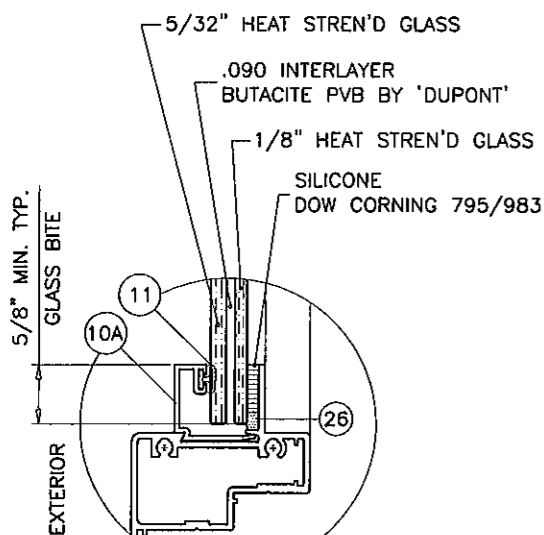


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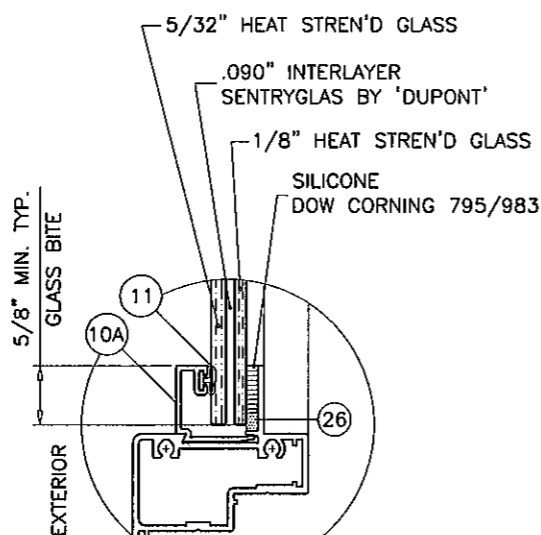


ALT. GLAZING OPTION

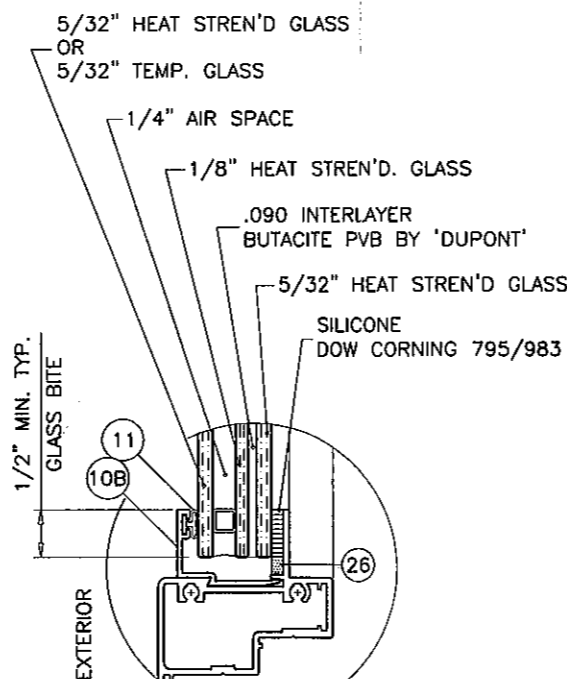
THESE GLAZING STOP CAN BE USED WITH GLASS TYPES 'A', 'B', 'C' & 'D'.



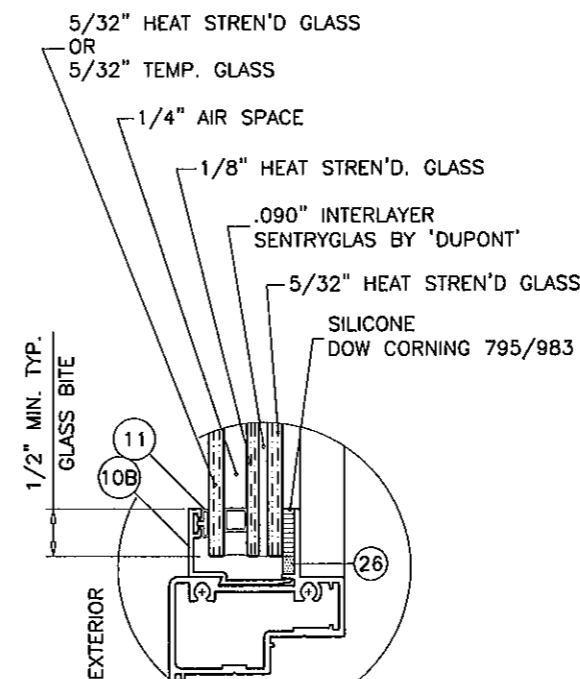
GLASS TYPE 'C'



GLASS TYPE 'D'

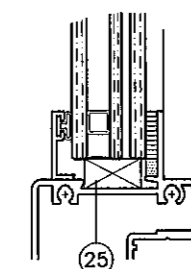


GLASS TYPE 'E'



GLASS TYPE 'F'

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SETTING BLOCKS AT INSUL. LAM. GLASS
NOTCH GLAZING BEAD LEG
TO CLEAR BLOCKS

GLAZING OPTIONS

NOTE:
TO QUALIFY FOR SMALL MISSILE IMPACT RATING
EXTERIOR PLY OF GLASS TYPES 'E' & 'F' MUST BE TEMPERED.

Engr: JAVAD AHMAD
CIVIL
FLA. PE # 70592
C.A.N. 3538

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afC
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ENGINEERS & PRODUCT DEVELOPMENT
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MIAMI, FLORIDA 33174
TEL. (305) 264-8100 FAX. (305) 262-6978
COMP-ANL W08-08ESW

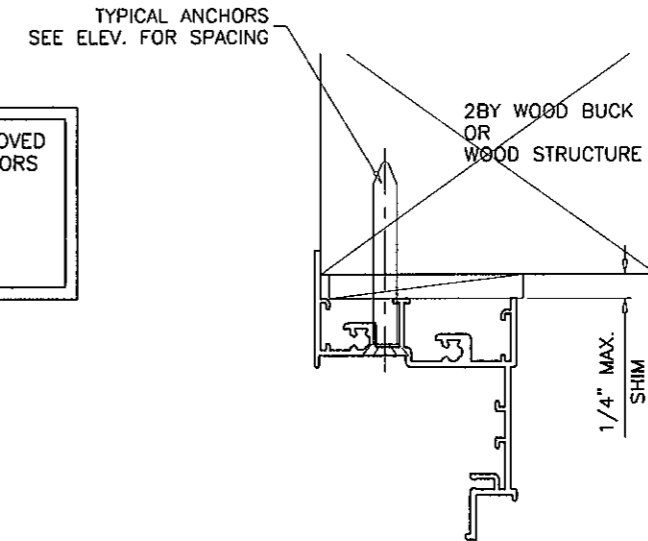
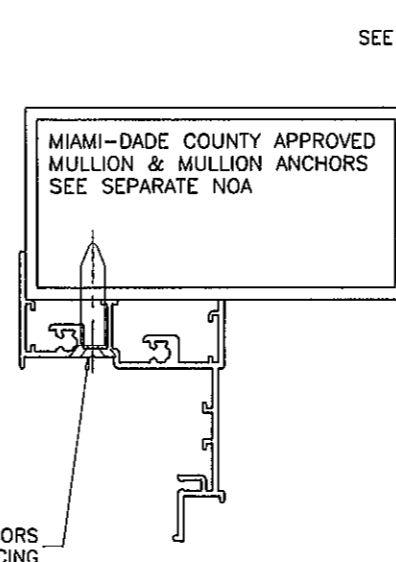
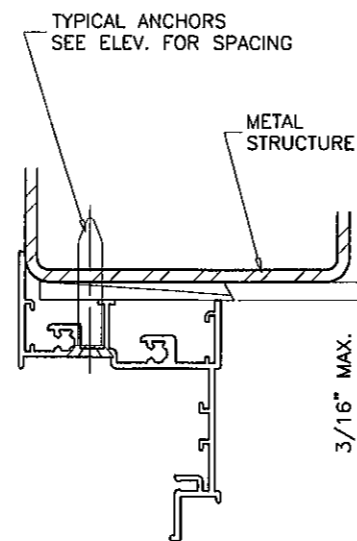
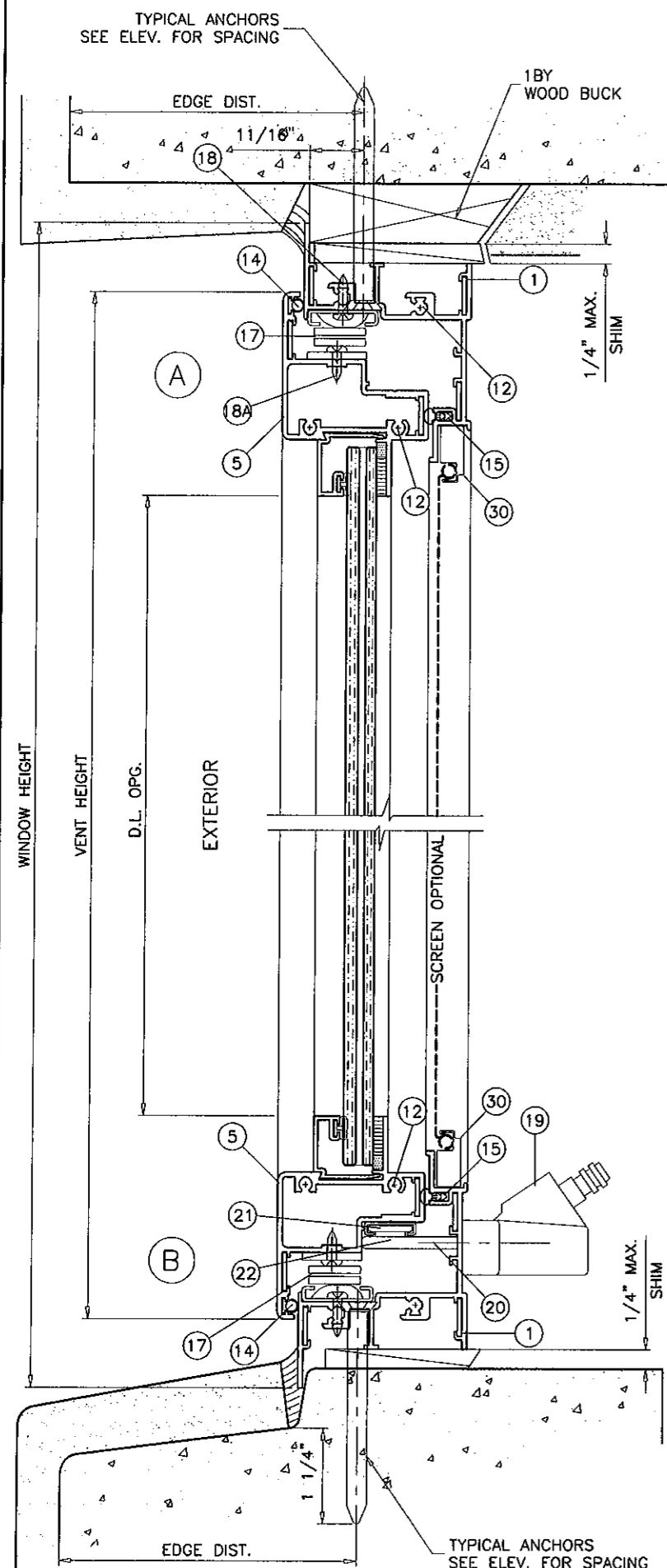
S-5000 ALUM OUTSWING CASEMENT WDW. (L.M.I.)
E.S. WINDOWS, LLC
5220 N.W. 72 AVE. BAY #4
MIAMI, FL. 33166
TEL. (305) 624-7775 FAX. (305) 624-7777

revisions:	no	date	by	description
	B	05.20.11		GENERAL REVISION
	C	02.20.12		GLAZING DETAIL REV.

date: 01-23-08
scale: 1/2" = 1"
dr. by: HAMID
chk. by:

drawing no.
W08-08

sheet 3 of 10

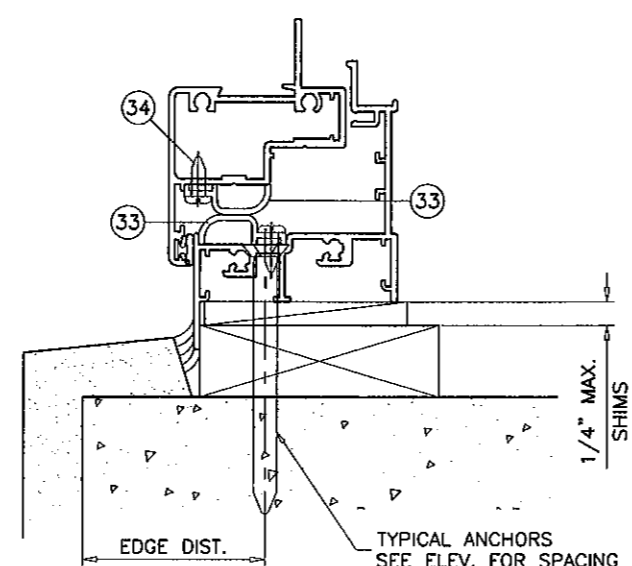


WOOD BUCKS AND METAL STRUCTURE NOT BY E.S. WINDOWS
MUST SUSTAIN LOADS IMPOSED BY GLAZING SYSTEM
AND TRANSFER THEM TO THE BUILDING STRUCTURE.

TYPICAL ANCHORS: SEE ELEV. FOR SPACING
1/4" DIA. ULTRACON BY 'ELCO' ($F_u=177$ KSI, $F_y=155$ KSI)
 INTO 2BY WOOD BUCKS OR WOOD STRUCTURES
 1-3/8" MIN. PENETRATION INTO WOOD
 THRU 1BY BUCKS INTO CONC. OR MASONRY
 1-1/4" MIN. EMBED INTO CONC. OR MASONRY
 DIRECTLY INTO CONC. OR MASONRY
 1-1/4" MIN. EMBED INTO CONC. OR MASONRY
#14 SMS OR SELF DRILLING SCREWS (GRADE 2 CRS)
 INTO MIAMI-DADE COUNTY APPROVED MULLIONS (MIN. THK. = .090")
 INTO METAL STRUCTURES
 STEEL : 12 GA. MIN. ($F_y = 36$ KSI MIN.)
 ALUMINUM : 1/8" THK. MIN. (6063-T5 MIN.)
 (STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)

TYPICAL EDGE DISTANCE
 INTO CONCRETE AND MASONRY = 1-1/2" MIN.
 INTO WOOD STRUCTURE = 11/16" MIN.
 INTO METAL STRUCTURE = 11/16" MIN.


CONCRETE AT HEAD, SILL OR JAMBS $f'_c = 3000$ PSI MIN.
 C-90 HOLLOW/FILLED BLOCK AT JAMBS $f'_m = 2000$ PSI MIN.



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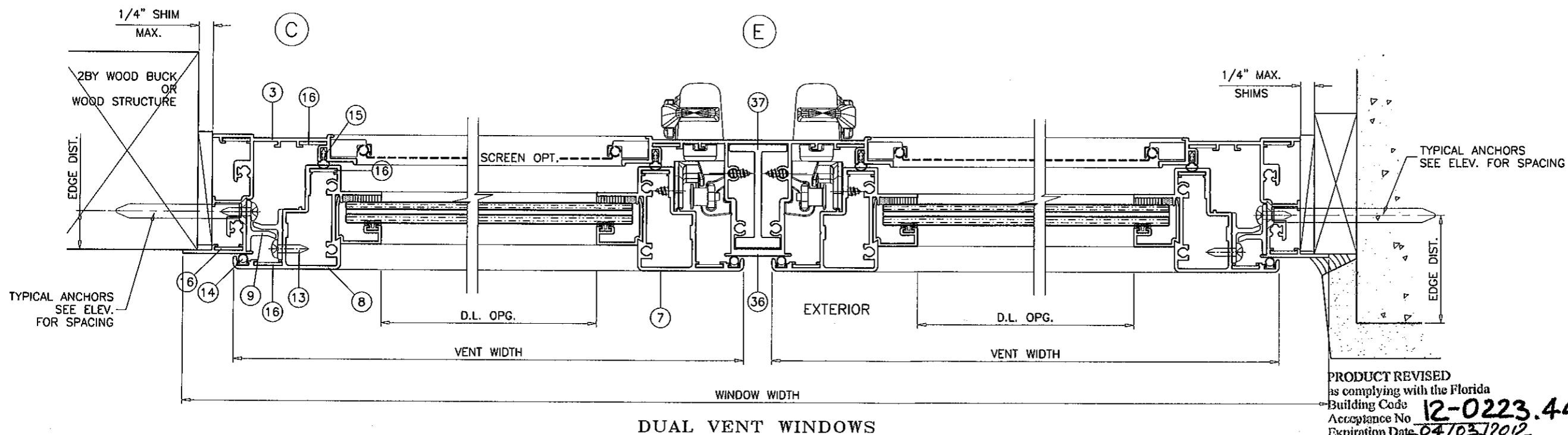
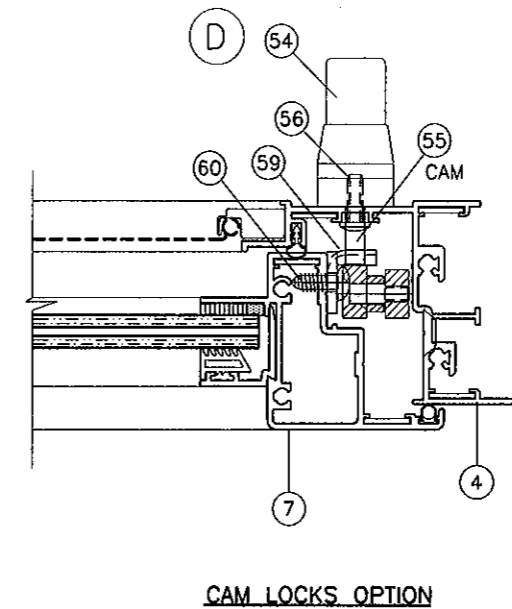
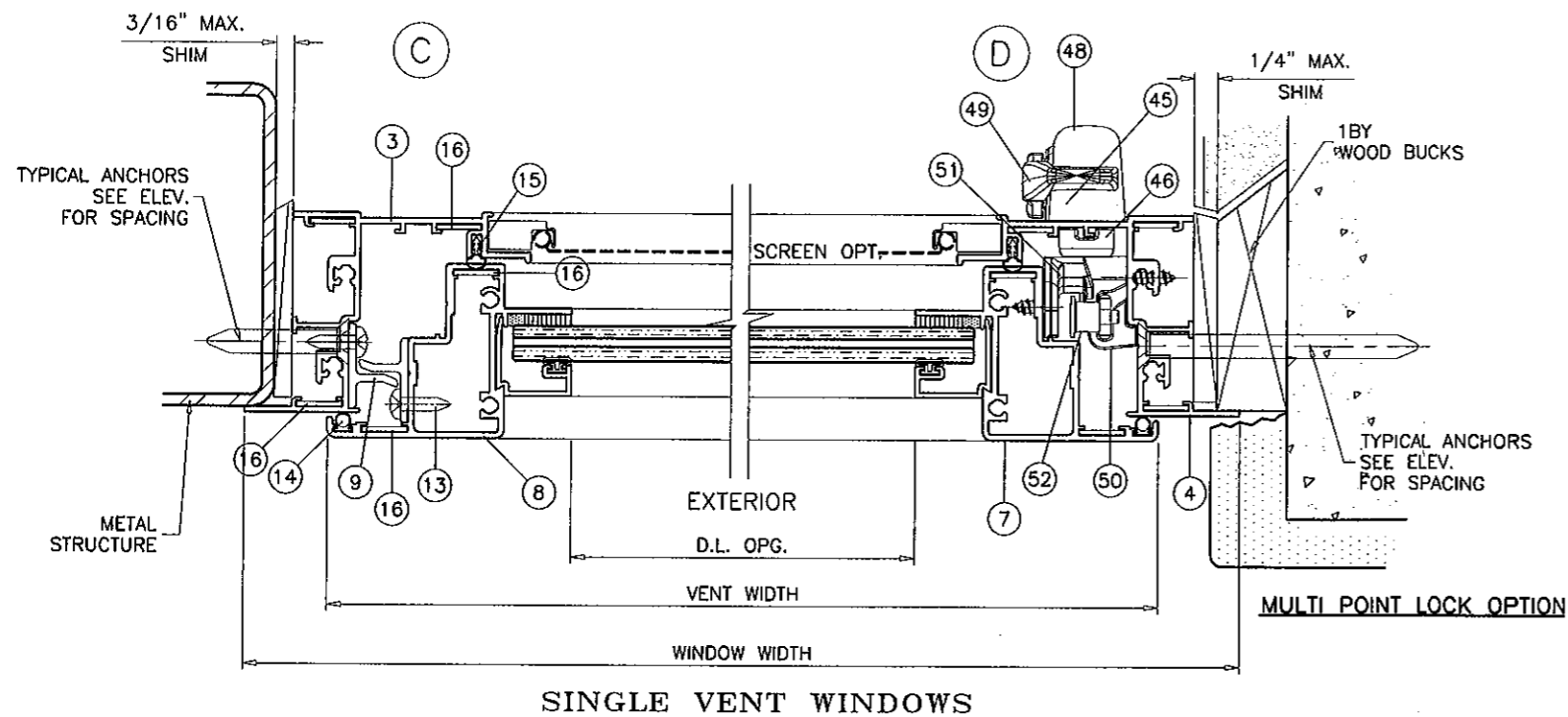
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chk. by:

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sheet 4 of 10



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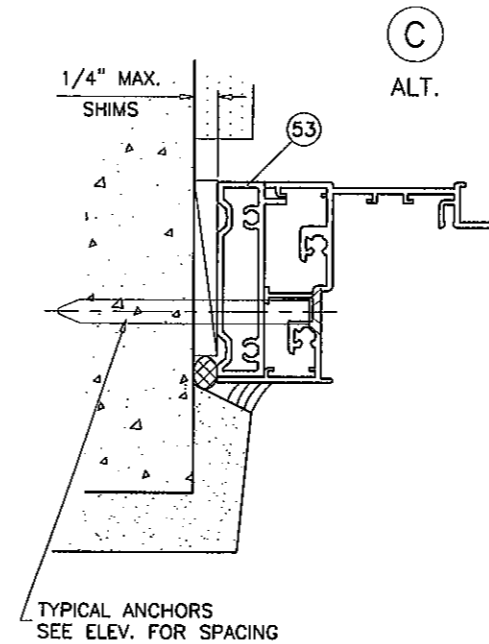
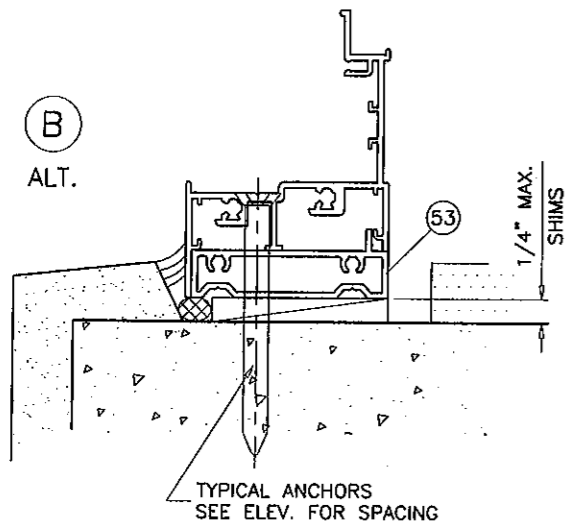
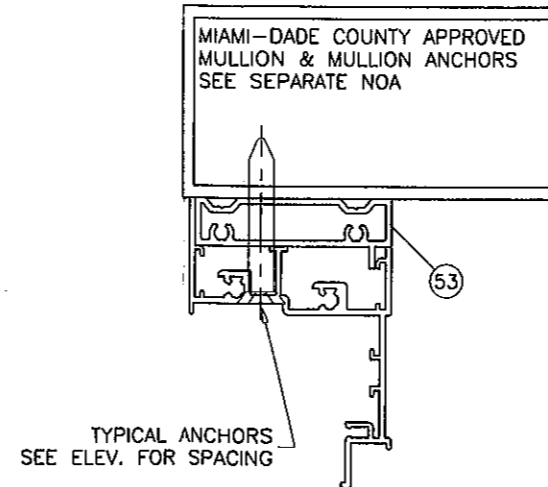
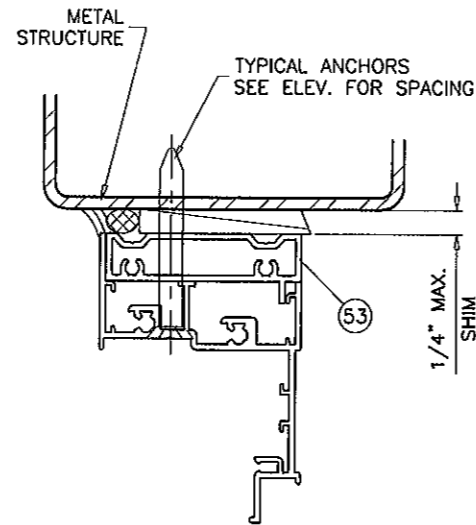
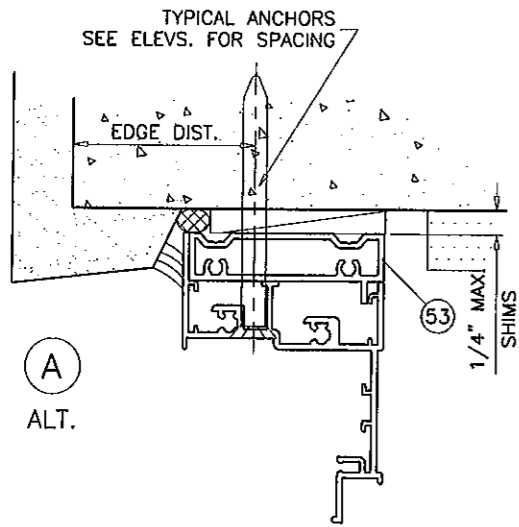
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AL-FAROOQ CORPORATION
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sheet 5 of 10



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Engr: JAVAD AHMAD
CIVIL
FLA. PE # 70592
C.A.N. 3538

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INSTALLATION DETAILS WITH FLUSH FRAME ADAPTER

af c
AL-FAROOQ CORPORATION
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TEL. (305) 264-8100 FAX. (305) 262-6978
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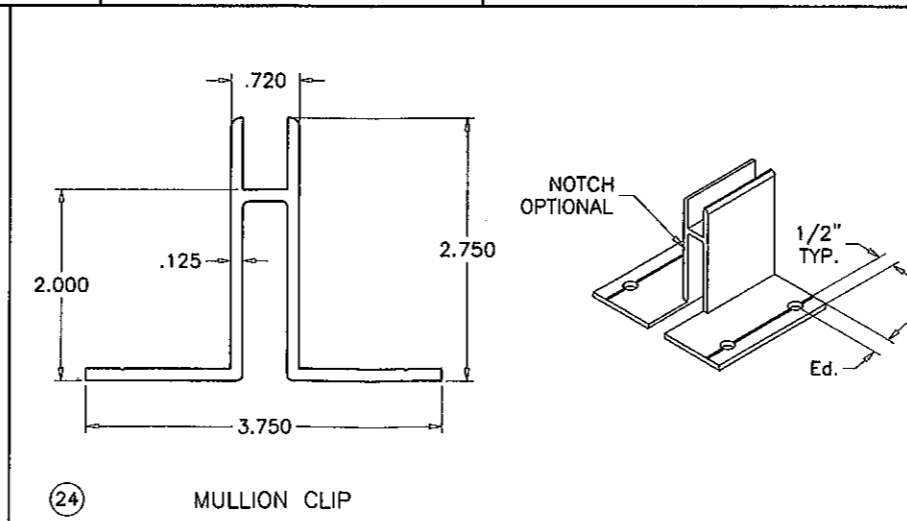
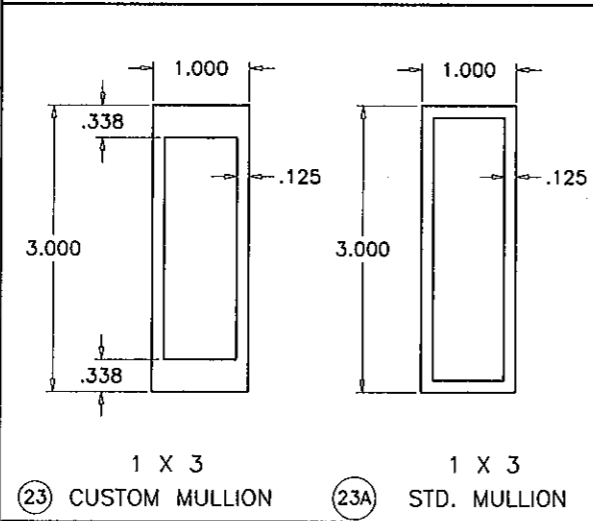
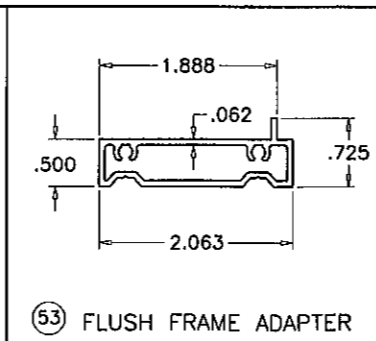
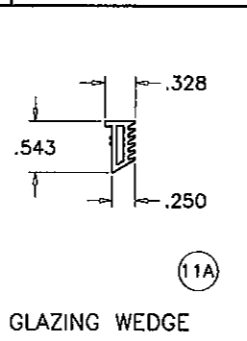
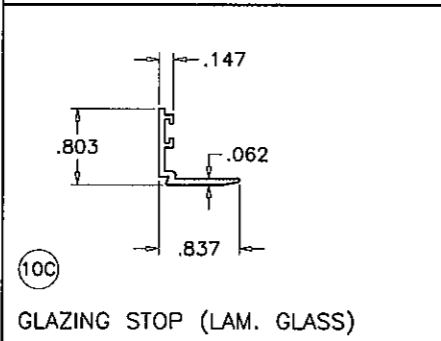
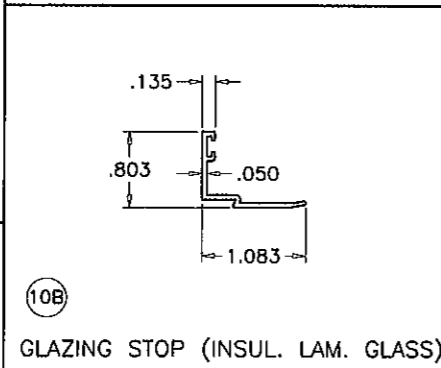
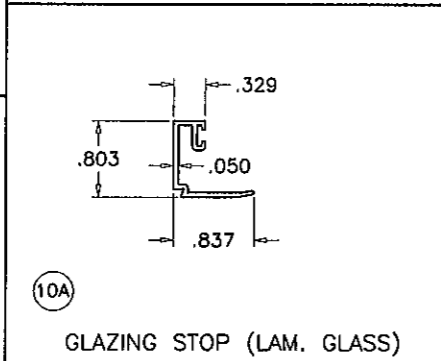
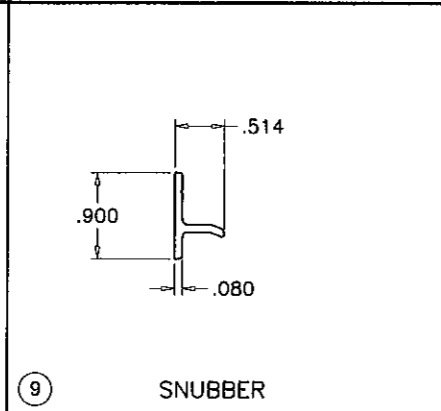
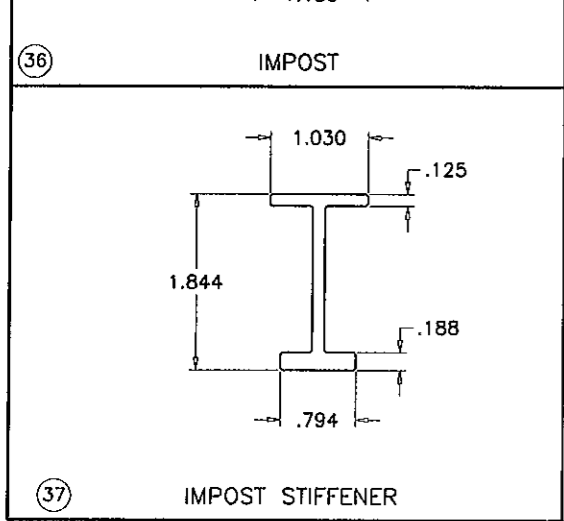
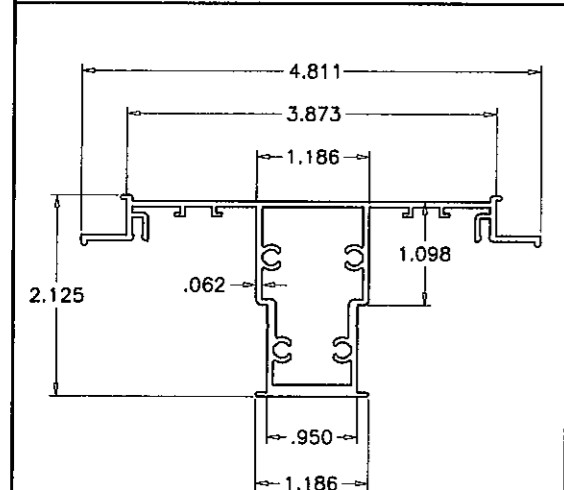
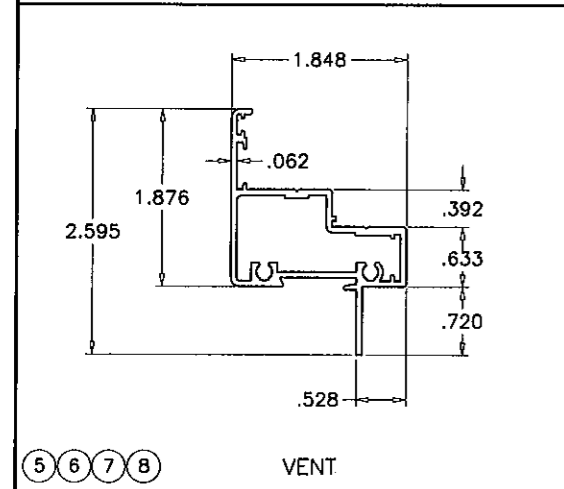
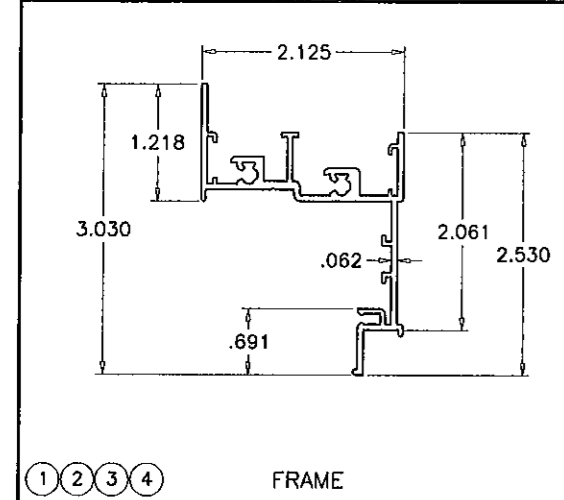
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chk. by:

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sheet 6 of 10



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CIVIL
FLA. PE # 70592
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ENGINEERS & PRODUCT DEVELOPMENT
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drawing no. W08-08 sheet 7 of 10																	

ITEM	PART #	QUANTITY	DESCRIPTION	MATERIAL	MANF./SUPPLIER/REMARKS
1	ES5001	1	FRAME HEAD	6063-T6	-
2	ES5001	1	FRAME SILL	6063-T6	-
3	ES5001	1/ VENT	FRAME JAMB-HINGE SIDE	6063-T6	-
4	ES5001	1/ VENT	FRAME JAMB-LATCH SIDE	6063-T6	-
5	ES5002	1/ VENT	VENT TOP RAIL	6063-T6	-
6	ES5002	1/ VENT	VENT BOTTOM RAIL	6063-T6	-
7	ES5002	1/ VENT	VENT SIDE RAIL-HINGE SIDE	6063-T6	-
8	ES5002	1/ VENT	VENT SIDE RAIL-LATCH SIDE	6063-T6	-
9	ES5004	2/ VENT	SNUBBERS, 2-1/2" LONG	6063-T6	-
10A	ES1103	AS REQD.	GLAZING BEAD (LAM. GLASS)	6063-T5	-
10B	-	AS REQD.	GLAZING BEAD (INSUL. LAM. GLASS)	6063-T5	-
10C	ES1008	AS REQD.	GLAZING BEAD (LAM. GLASS)	6063-T6	-
11	27-425	AS REQD.	GLAZING GASKET	EPDM	DUROMETER 60 SHORE 'A'
11A	ES1010	AS REQD.	GLAZING WEDGE	SOFT PVC	DUROMETER ±65 SHORE 'A'
12	-	AS REQD.	FRAME & VENT ASSEMBLY SCREWS	-	#10 X 1-1/2" PH SMS
13	-	2/ SNUBBER	SNUBBER INSTALLATION SCREWS	-	#8 X 1/2" PH SMS
14	E202	AS REQD.	OUTER WEATHERSTRIPPING (POLYPROPYLENE BASE, TPE BULB)	-	DUROMETER 65 SHORE 'A'
15	ES5005	AS REQD.	INNER WEATHERSTRIPPING	EPDM	DUROMETER 60 SHORE 'A'
16	PJS40-SS	AS REQD.	CORNER LOCK	ST. STEEL	SULLIVAN & ASSOCIATES
17	301SS	2/ VENT	4 BAR HINGES-HEAVY DUTY	-	TRUTH HARDWARE
18	-	3/ HINGE	HINGE MOUNTING SCREWS AT FRAME	-	#10 X 1/2" PH SMS
18A	-	4/ HINGE	HINGE MOUNTING SCREWS AT VENT	-	#10 X 1/2" PH SMS
19	23 SERIES	1/ VENT	SINGLE ARM OPERATOR (AT 8-1/2" FROM ENDS)	-	TRUTH HARDWARE
20	-	4/ OPER.	OPERATOR MOUNTING SCREWS	-	#10-24 X 3/8" PH SMS
21	30175	1/ OPER.	13-3/4" LONG TRACK	ST. STEEL	TRUTH HARDWARE
22	-	2/ TRACK	TRACK MOUNTING SCREWS	-	#10 X 3/8" PH SS SMS
23	-	AS REQD.	1X3 CUSTOM MULLION	6063-T6	-
23A	-	AS REQD.	1X3 STANDARD MULLION	6063-T6	-
24	-	AS REQD.	MULLION CLIP	6063-T6	-
25	-	2/ LITE	SETTING BLOCK, 5/16" X 5/8" X 4" LONG	EPDM	AT 6" FROM EACH END, DUROMETER 65±5
26	-	8/ LITE	TAPE SPACER (1/4" X 1/2")	FOAM	AT 6" FROM GLASS ENDS
30	-	OPTIONAL	5/16" BOX SCREEN	-	-
33	ES5009	2/ VENT	ANTI SAG SKATE, 2" LONG	NYLON/CELCON	M&M PLASTICS
34	-	2/ SKATE	SKATE MOUNTING SCREWS	-	#6 x 1/2" PHSMS
36	ES5003	1	IMPOST	6063-T6	
37	ES5010	AS REQD.	IMPOST STIFFENER	6063-T6	
45	CL01-0500	-	MULTI-POINT LOCK MECHANISM		INTERLOCK
46	-	-	LOCK FASTENER PLATE		-
47	-	2/ LOCK	LOCK FASTENER SCREWS		THREAD FORMING
48	CL01-2250-XXX	-	SNAP ON COVER		-
49	CL01-1050-XXX	-	SNAP ON HANDLE		-
50	-	-	GUIDE (ACETAL)		-
51	-	-	KEEPER (ACETAL)		-
52	-	-	LOCK BAR (304 ST/ST)		-
53	ES-5017	AS REQD.	FLUSH FRAME ADAPTER	6063-T5	OPTIONAL
54	-	1/ VENT	LOCKING HANDLE	-	SULLIVAN & ASSOC.
55	-	2/ VENT	LOCKING CAM (AT 11-1/2" & 50-1/2" FROM BOTTOM)	-	SULLICAN & ASSOC.
56	-	2/ LOCK	LOCK MOUNTING SCREWS	-	#6-32 x 1/2 PH MS
57	ES5013	1/VENT	LOCK HANDLE/CAM CONNECTOR	-	1/4" x 1/2" ALUM. BAR
58	ES5011	2/ BAR	CONNECTOR SCREWS	-	CUSTOM
59	CS-200K-SS	2/ VENT	KEEPERS (AT 12" & 51" FROM BOTTOM)	ST STEEL	SULLIVAN & ASSOC.
60	-	2/ KEEPER	KEEPER MOUNTING SCREWS	-	#10 X 3/8" PH SMS

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SEALANTS: By *[Signature]*
Miami Dade Product Control

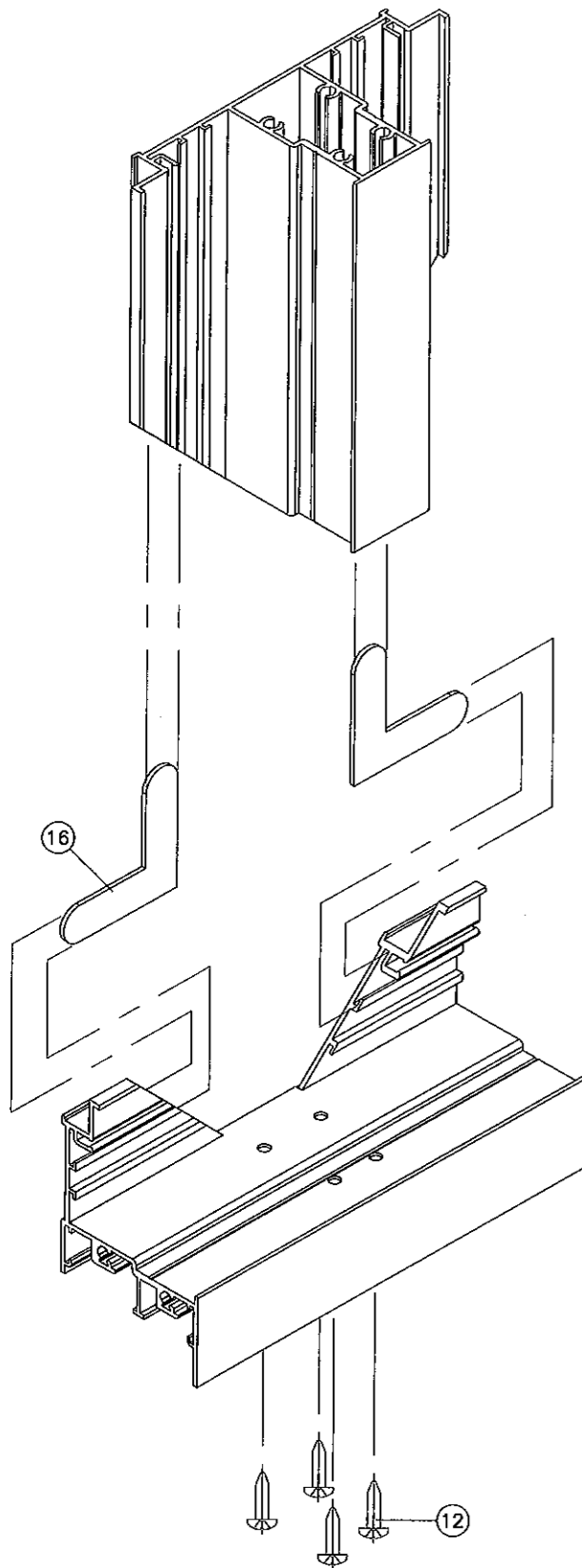
ALL FRAME AND VENT CORNERS AND INSTALLATION SCREWS
SEALED WITH CLEAR/ALUMINUM COLORED SEALANT.

Engr: JAVAD AHMAD
CIVIL
FLA. PE # 70592
C.A.N. 3538

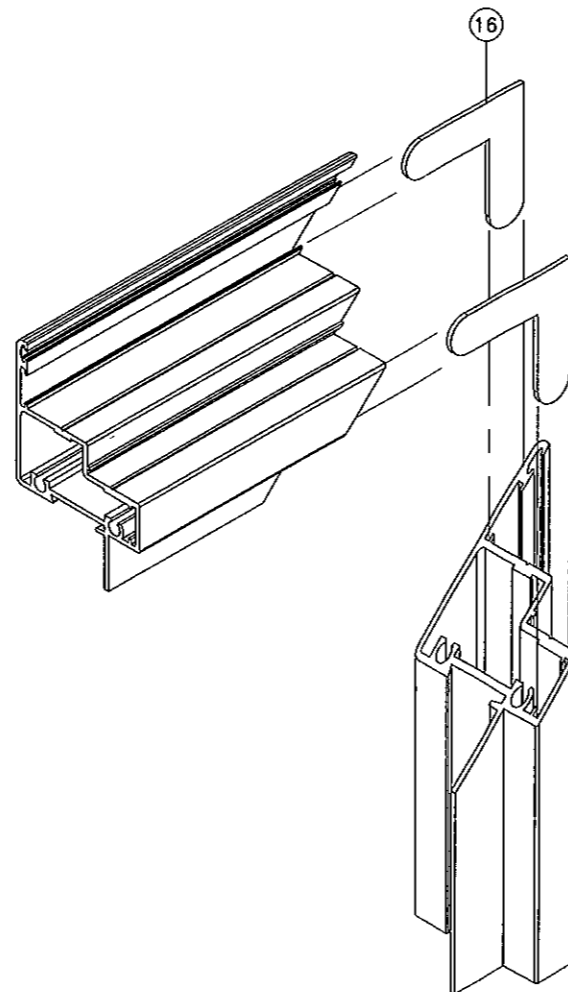
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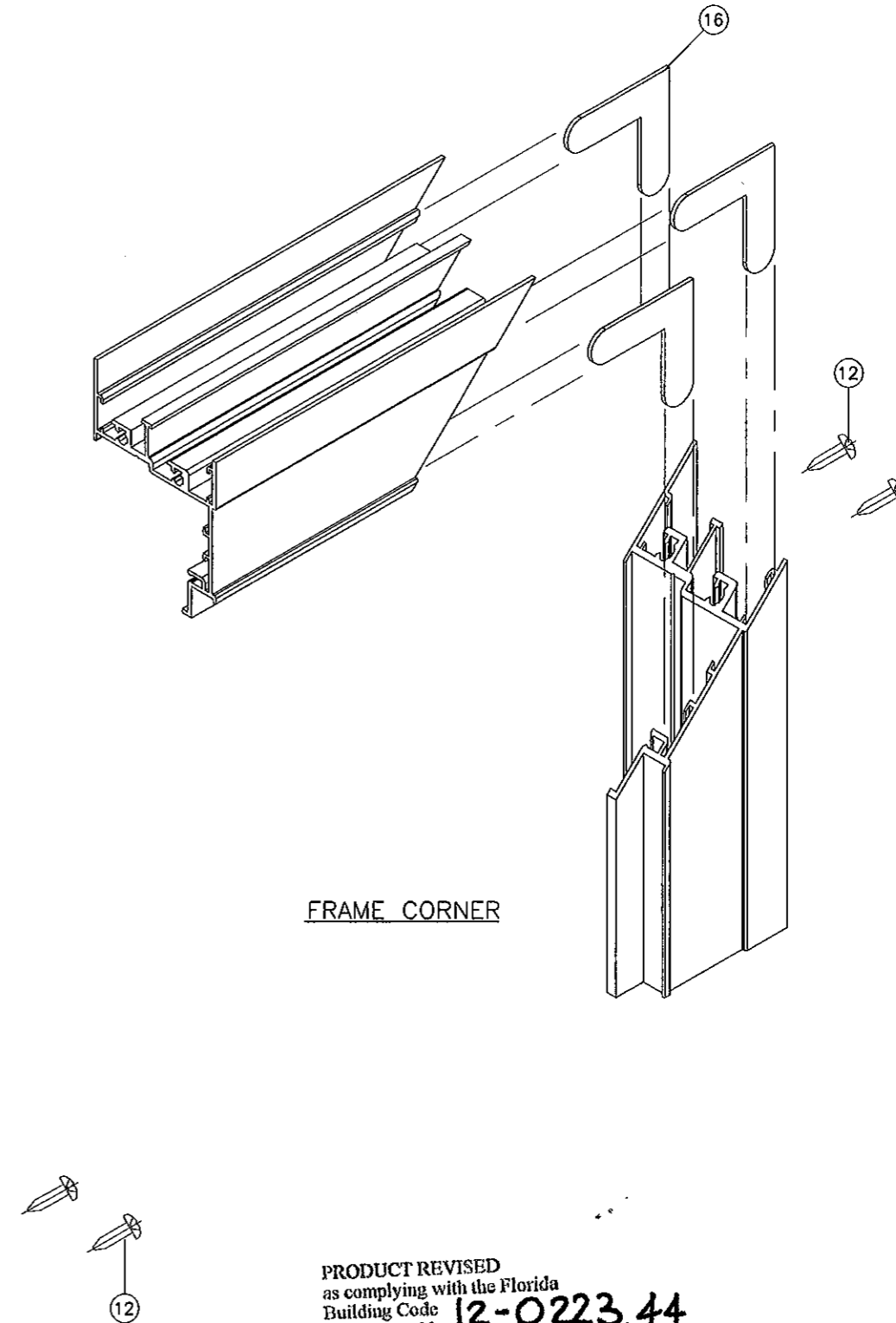
a f c AL-FAROOQ CORPORATION ENGINEERS & PRODUCT DEVELOPMENT 1235 S.W. 87 AVE MIAMI, FLORIDA 33174 TEL (305) 264-8100 FAX (305) 262-6978 COMP-ANL W08-08ESW																	
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IMPOST CORNER



VENT CORNER



FRAME CORNER

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. **12-0223.44**
Expiration Date **04/03/2013**
By *[Signature]*
Miami Dade Product Control

Engr: JAVAD AHMAD
CIVIL
FLA. PE # 70592
C.A.N. 3538

MAR 09 2012

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
1235 S.W. 87 AVE
MIAMI, FLORIDA 33174
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af c
COMP-ANL\W08-08ESW

S-5000 ALUM OUTSWING CASEMENT WDW. (L.M.I.)

E.S. WINDOWS, LLC
5220 N.W. 72 AVE. BAY #4
MIAMI, FL. 33166
TEL. (305) 624-7775 FAX. (305) 624-7777

no	date	by	description
A	02.18.09		NO CHANGE THIS SHEET
B	05.20.11		GENERAL REVISION
C	02.20.12		NO CHANGE THIS SHEET

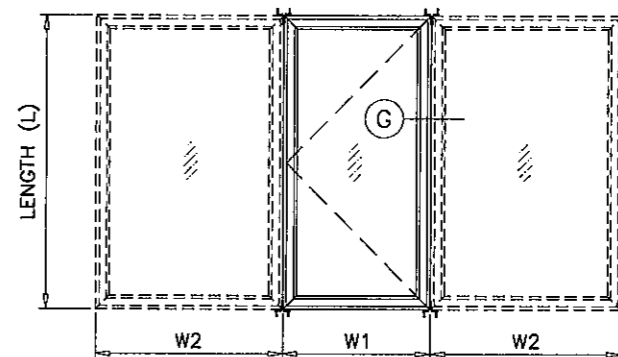
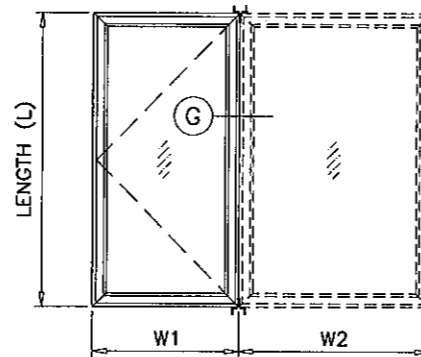
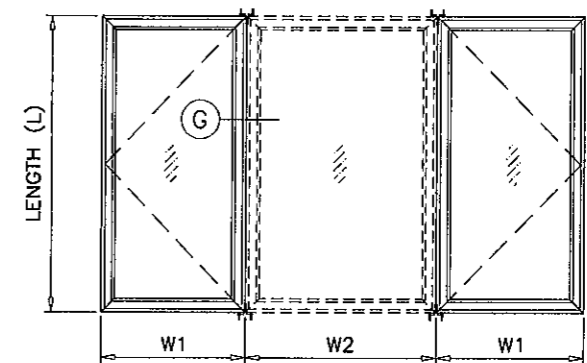
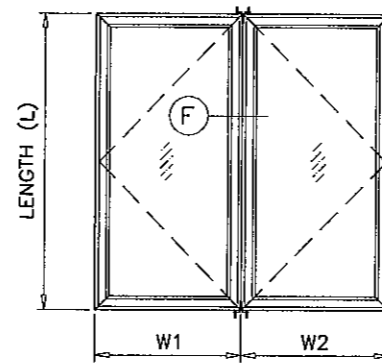
date: 01-23-08
scale: 1/2" = 1"
dr. by: HAMID
chk. by:

drawing no.
W08-08
sheet 9 of 10

MULLION LOAD CAPACITY - PSF			
WINDOW DIMS.		1 X 3 STD. MULL	1 X 3 CUSTOM MULL
WIDTH (W)	LENGTH (L)	EXT.(+) INT.(-)	EXT.(+) INT.(-)
26-1/2"	58"	90.0	90.0
37"		90.0	90.0
42"		90.0	90.0
45"		90.0	90.0
48"		90.0	90.0
53-1/8"		90.0	90.0
62"		90.0	90.0
26-1/2"	63"	90.0	90.0
37"		90.0	90.0
42"		90.0	90.0
45"		90.0	90.0
48"		90.0	90.0
53-1/8"		90.0	90.0
62"		90.0	90.0
26-1/2"	74-1/4"	90.0	90.0
37"		90.0	90.0
42"		82.5	90.0
45"		78.6	90.0
48"		75.4	89.1
53-1/8"		71.0	89.2
26-1/2"	76"	90.0	90.0
37"		84.2	90.0
42"		76.4	90.0
45"		72.8	90.0
48"		69.7	87.4
51"		67.1	84.2

MULLION LOAD CAPACITY - PSF			
WINDOW DIMS.		1 X 3 STD. MULL	1 X 3 CUSTOM MULL
WIDTH (W)	LENGTH (L)	EXT.(+) INT.(-)	EXT.(+) INT.(-)
30"	54"	90.0	90.0
36"		90.0	90.0
42"		90.0	90.0
48"		90.0	90.0
54"		90.0	90.0
60"		90.0	90.0
62"		90.0	90.0
30"	60"	90.0	90.0
36"		90.0	90.0
42"		90.0	90.0
48"		90.0	90.0
54"		90.0	90.0
60"		90.0	90.0
62"		90.0	90.0
30"	66"	90.0	90.0
36"		90.0	90.0
42"		90.0	90.0
48"		90.0	90.0
54"		90.0	90.0
59"		90.0	90.0
30"	72"	90.0	90.0
36"		90.0	90.0
42"		90.0	90.0
48"		83.6	90.0
54"		78.4	90.0
62"		90.0	90.0
30"	76"	90.0	90.0
36"		86.1	90.0
42"		76.4	90.0
48"		69.7	87.4
51"		67.1	84.2

CLIPPED MULLIONS



TYPICAL ELEVATIONS

SIDE BY SIDE WINDOWS

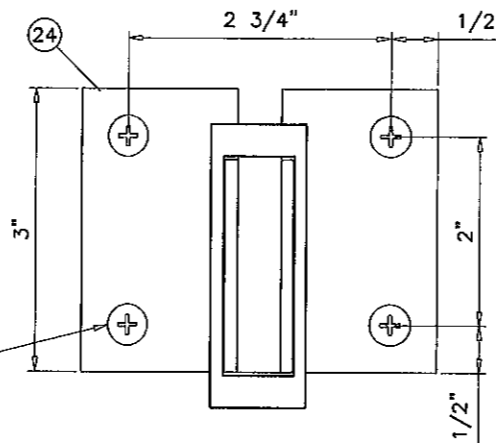
SIDE BY SIDE APPLIES TO TWO OR MORE WINDOWS

$$\text{WIDTH (W)} = \frac{W1 + W2}{2}$$

NOTES:

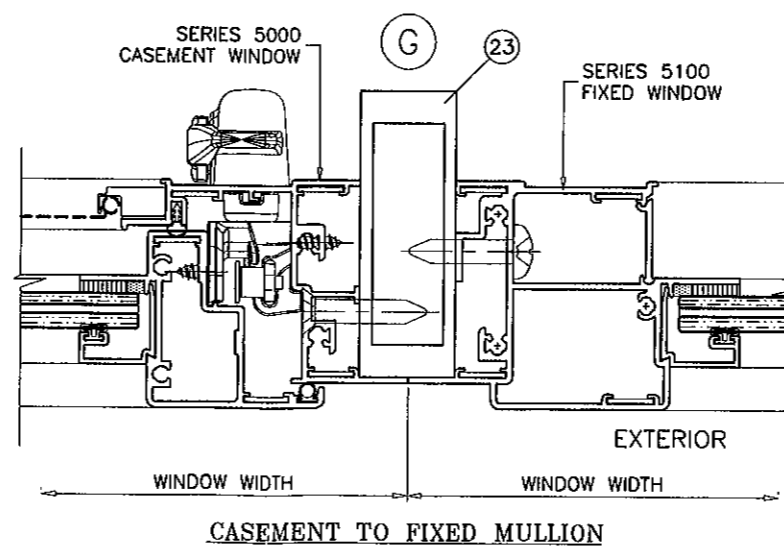
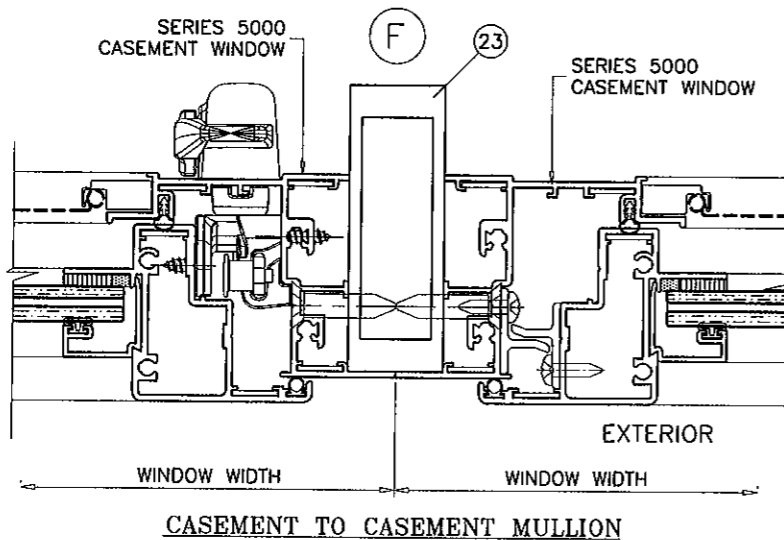
- USE CHART ON THIS SHEET FOR SIDE BY SIDE CONNECTION CAPACITY OF WINDOW MULLION.
- FOR CASEMENT WINDOW CAPACITY SEE SHEET 2 OF 10.
- FOR FIXED WINDOW CAPACITY SEE SEPARATE NOA.
- LOWER VALUES FROM STEPS 1, 2 OR 3 WILL APPLY TO ENTIRE SYSTEM.

TYPICAL ANCHORS
4 PER CLIP
SEE SHEET 4
FOR DESCRIPTION



EDGE DISTANCES FOR MULLION CLIPS

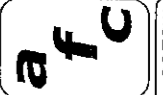
INTO CONCRETE AND MASONRY = 2" MIN.
INTO WOOD STRUCTURE = 11/16" MIN.
INTO METAL STRUCTURE = 11/16" MIN.



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